

**CONTINUED MONITORING OF BOISE'S WINTERING BALD EAGLES, AND
MONITORING OF THE DEAD DOG CREEK BALD EAGLE ROOST SITE,
WINTERS 1997/1998 AND 1998/1999**

Final Report prepared by

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February 2000

EXECUTIVE SUMMARY

This document outlines results from surveys of the Barber Pool and Dead Dog Creek Communal Roosts, and presents results from regular surveys of known eagle foraging areas conducted throughout the winters of 1997-1998 and 1998-1999. The main objectives of this study were to:

1. Monitor bald eagle use of the Barber Pool and Dead Dog Creek communal night roosts simultaneously through the winter.
2. Monitor bald eagle use of known foraging areas in conjunction with roost monitoring.
3. Describe how weather variables and factors influencing microclimate at roost areas are related to bald eagle use throughout the winter.

A total of 45 roost surveys were conducted at Barber Pool between 1 December 1997 and 13 March 1998. An average of 4.4 bald eagles were observed using the Barber Pool Communal Roost nightly during the 1997-1998 winter season. A total of 43 roost surveys were conducted at Barber Pool between 2 December 1998 and 10 March 1999. An average of 5.1 bald eagles were observed using the Barber Pool Communal Roost nightly during the 1998-1999 winter season. This compares to an average of 8.4 eagles during the 1996-1997 winter, 12.0 during the 1995-1996 winter, 3.0 during the 1994-1995 winter, and 10.0 during the 1993-1994 winter. Roost counts peaked at 13 eagles during early January 1998, and again at 13 eagles during late January and mid-February 1999, corresponding with some of the season's coldest temperatures. Bald eagles were observed roosting within Barber Pool in three separate locations (or subroosts): the 'Barber Pool Roost', near Eckert Road (formerly referred to as the 'Raptor Ridge' roost), and on the east side of the river on property owned by Oliver Gregerson (the 'Gregerson Roost'). The Barber Pool subroost was used only a few times during the 1997-1998 and 1998-1999 winters. The 'Gregerson' subroost was used most consistently by eagles during the majority of the 1997-1998 and 1998-1999 winters. The Gregerson subroost consisted of 6-10 live cottonwood trees located immediately next to the river channel, upstream of the Gregerson house and compound.

A total of 15 roost surveys were conducted at Dead Dog Creek between 3 December 1997 and 11 March 1998. A total of 15 roost surveys were conducted at Dead Dog Creek between 9 December 1998 and 24 March 1999. Consistently more eagles used the Dead Dog Creek Communal Roost than the Barber Pool Communal Roost throughout both winters of this study. An average of 15.7 and 16.2 bald eagles were observed using the Dead Dog Creek Communal Roost nightly during the 1997-1998 and 1998-1999 winter seasons, respectively. Roost counts peaked at 35 eagles during late January and early February 1998. Roost counts peaked at 28 eagles during mid-January 1999. Peak roost counts at Dead Dog Creek did not coincide with the season's coldest temperatures, nor were they related to snow depth or amount of snow on roost trees. Two main subroosts were identified within the Dead Dog Creek roost stand.

The roost stand was approximately 76 ha (188 ac.) in size, and contained mixed-conifer habitat dominated by Douglas-fir and ponderosa pine. The main vegetation type within the stand was Douglas-fir/mountain ninebark. Trees within the stand were mostly even-aged Douglas-fir and

ponderosa pine that were approximately 60-85 years old. Fire burned through the stand approximately 90 years ago, sparing some Douglas-fir and ponderosa pine which are now 140-200 years old. Bald eagles used these remnant trees exclusively for perching and roosting. These trees were taller, had greater girths, and were older than the majority of trees within the stand.

A total of 15 surveys of known foraging areas were conducted during the winter of 1997-1998. A total of 14 surveys of known foraging areas were conducted during the winter of 1998-1999. We recorded an average of 17.6 and 17.2 bald eagles on all surveys of foraging areas combined during the 1997-1998 and 1998-1999 winters, respectively. During both winters of the study, eagles were most numerous on Lucky Peak and Arrowrock Reservoirs, and least numerous in the desert south of Boise. We recorded an average of 5.1 and 5.3 bald eagles per weekly foraging survey of the Boise River during the 1997-1998 and 1998-1999 winters, respectively. The majority of eagles observed on the Boise River were recorded upstream from Eckert Road in Barber Pool, the canyon between Diversion Dam and Lucky Peak Dam, and near Lucky Peak Dam. We suggest that the majority of eagles roosting at Dead Dog Creek made daily foraging flights to Lucky Peak and Arrowrock Reservoirs or to foothills foraging areas. We suggest that the majority of eagles roosting at Barber Pool made daily foraging flights to the Boise River or desert foraging areas.

One objective of this report is to provide recommendations to the public agencies involved for management of the Dead Dog Creek Communal Roost. Recommendations are made to ensure the continued use of Dead Dog Creek or other suitable or potential habitats by bald eagles for communal roosting throughout the short- and long-term future.

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ACKNOWLEDGMENTS

I wish to thank Community Planning Association and O'Neill Enterprises, Inc. for their continued interest in Boise's wintering bald eagles. Their support, coordination, and funding has made this yearly research possible. Their sincere efforts will help ensure the continued use of the Boise River and Barber Pool by wintering bald eagles. The U.S. Bureau of Land Management, U.S. Forest Service, and Idaho Department of Fish and Game have taken a sincere interest in describing bald eagle use patterns at the newly-found roost site at Dead Dog Creek. Their funding, in-kind support, coordination, and assistance in the field made the monitoring at Dead Dog Creek possible. I wish to thank Jack LaRocco (BLM) and Larry Donohoo (FS) for their interest and support of this monitoring project. Jerry Scholten (IDFG) granted access to the Boise River Wildlife Management Area (WMA), provided use of an ATV and snowmobile, and provided labor to assist with roost monitoring and carcass placement. The monitoring project could not have been accomplished without his constant and much-needed assistance. Results from annual Midwinter Eagle Counts, literature on bald eagle wintering behavior, and technical assistance developing monitoring protocol were provided by Karen Steenhof, U.S. Geological Survey, Snake River Field Station. Karen Steenhof and Trent Brown assisted with roost surveys. Trent Brown assisted with surveys of bald eagle foraging areas. Tom Zariello, U.S. Geological Survey, Snake River Field Station, prepared maps contained in the report. Greg Townley conducted field work associated with the Dead Dog Creek stand exam, and assisted with compilation of stand exam data and preparation of the stand description contained in this report.

INTRODUCTION

The bald eagle (*Haliaeetus leucocephalus*) is the only North American representative of the fish or sea eagles (Brown and Amadon 1968), and is endemic to North America. The breeding range formerly included most of the continent, but eagles now nest mainly in Alaska, Canada, the Pacific Northwest states, the Great Lake states, Florida, and the Chesapeake Bay. The winter range includes most of the breeding range, but extends from southern Alaska and southern Canada southward. In 1978, the bald eagle was federally listed as endangered in all of the continental U.S. except Minnesota, Wisconsin, Michigan, Oregon, and Washington, where it was classified as threatened. The listing of the species as endangered in Idaho required federal and state agencies to identify and protect important bald eagle habitats. Consistent increases in bald eagle numbers over the past decade resulted in the down-listing of the species from endangered to threatened in 1994. In 1998, the U.S. Fish and Wildlife Service proposed de-listing of the species.

Bald eagles both breed and winter in the Boise River Drainage of southwest Idaho (Kaltenecker and Bechard 1995). Bald eagles wintering in the Boise River Corridor are valued by the local public, and are a component of what many consider quality of life in the Boise area (Steenhof 1992). The Boise River Bald Eagle Task Force, comprised of representatives of federal, state, and local government agencies, initiated a study of wintering bald eagles on the Boise River in 1993 (Kaltenecker et al. 1994). The goal of the study was to outline the best management strategies for conservation and enhancement of wintering bald eagle numbers on the Boise River.

The study described results from surveys of bald eagles during the 1993-1994 winter season. Continued interest in Boise's wintering bald eagles resulted in further study during subsequent winter seasons. Both surveys of eagles along the Boise River and at the Barber Pool Communal Roost were conducted during the 1994-1995 winter season (Kaltenecker 1995). This research described similar patterns of eagle use to those identified during the previous season, but showed a significant decrease in use of the Barber Pool Communal Roost. Concern over this apparent decrease and potential effects from ongoing development projects in the vicinity of the roost resulted in continued study during the next three winter seasons. Projects under construction near Barber Pool during this period included the ITD Highway 21 connector bridge, sewer construction at the bridge site, the Surprise Valley housing development, and the Shakespeare Festival amphitheater construction. Eagles have continued to use the Barber Pool Communal Roost throughout the past three winter seasons, showing variable use of the area. Both numbers and use patterns of eagles using the Barber Pool Communal Roost have varied during each winter of this study (Kaltenecker 1997).

During the 1996-1997 winter, additional monitoring was conducted at nearby known eagle foraging areas including Lucky Peak and Arrowrock Reservoirs, in the nearby foothills, the desert south of Boise, and the Boise River. Surveys of foraging areas were conducted to better understand how total numbers of eagles in the nearby area affect counts of eagles at the Barber Pool Communal Roost. During the 1996-1997 winter, the majority of foraging eagles were observed on the Boise River upstream of Eckert Road (Kaltenecker 1997).

Also during the 1996-1997 winter, searches were conducted in the Boise foothills for other suspected night roosts. A major bald eagle roost was found at Dead Dog Creek, a tributary of More's Creek, near Lucky Peak Reservoir (Kaltenecker 1997). Numbers of bald eagles using the Dead Dog Creek Communal Roost varied from 10-30 individuals during February and March 1997. Golden eagles (*Aquila chrysaetos*) also were observed perching within the stand on several occasions. Dead Dog Creek is located on the northeast slope of the Lucky Peak/Shaw Mountain complex. The area is unroaded, and thus inaccessible to motor vehicles. Dead Dog Creek is the southernmost timbered drainage on Lucky Peak, and contains mixed-conifer habitat dominated by Douglas-fir (*Pseudotsuga menziesii*) and ponderosa pine (*Pinus ponderosa*). Bald eagles were observed using a timber stand within this drainage for communal roosting in T3N, R4E, sections 7, 17, and 18. Dead Dog Creek is located on the Lucky Peak USGS topographic quadrangle map. The roost area was located using the Global Positioning System (GPS), and coordinates of the center point are 43°36.54'N by 116°01.32'W. The roost stand is located in Ada County, and ownership is shared by the U.S. Forest Service, the U.S. Bureau of Land Management, and Idaho Department of Fish and Game.

Monitoring of bald eagle use of the Barber Pool Communal Roost continued during the 1997-1998 and 1998-1999 winter seasons. In addition, regular monitoring of the newly-found roost at Dead Dog Creek also occurred throughout these two winters. Surveys of nearby eagle foraging areas were also conducted to describe how habitat use, foraging, and roosting are interrelated in the local area and at the two communal roosts. The objectives of this study were to:

1. Monitor bald eagle use of the Barber Pool and Dead Dog Creek communal night roosts simultaneously through the winter.
2. Monitor bald eagle use of known foraging areas in conjunction with roost monitoring.
3. Describe how weather variables and factors influencing microclimate at roost areas are related to bald eagle use throughout the winter.

This document outlines results from a 2-year study of the Barber Pool and Dead Dog Creek Communal Roosts, and presents results from regular surveys of known eagle foraging areas conducted throughout the winters of 1997-1998 and 1998-1999. Methods described in this report for surveys of the Barber Pool Communal Roost allowed for duplication of surveys conducted during the previous four winter seasons, so results from all six winters can be directly compared. Also contained in this report are recommendations for future study of both communal roosts, and recommendations for best management of the Dead Dog Creek Communal Roost.